



022404

13281 U.S. PTO

Please type a plus sign (+) inside this box → ☐

PTO/SB/05 (11-00)

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 C.F.R. 1.53(b))

Attorney Docket No. 8947-000075/US

First Inventor MOON-SOOK LEE et al.

Title APPARATUS FOR FABRICATING SEMICONDUCTOR DEVICES, HEATING ARRANGEMENT, SHOWER HEAD ARRANGEMENT, METHOD OF REDUCING THERMAL DISTURBANCE DURING FABRICATION OF A SEMICONDUCTOR DEVICE, AND METHOD OF EXCHANGING HEAT DURING FABRICATION OF A SEMICONDUCTOR

Express Mail Label No.

22553 U.S. PTO  
10/784772

022404

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 211]  
(preferred arrangement set forth below)  
- Descriptive title of the Invention  
- Cross References to Related Applications  
- Statement Regarding Fed sponsored R & D  
- Reference to sequence listing, a table, or a computer program listing appendix  
- Background of the Invention  
- Brief Summary of the Invention  
- Brief Description of the Drawings (if filed)  
- Detailed Description  
- Claim(s)  
- Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 8]
5. Oath or Declaration [Total Pages 3]  
a. ☒ Newly executed (original)  
b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for a continuation/divisional with Box 18 completed)  
i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

**ADDRESS TO:**Commissioner for Patents  
Box Patent Application  
P.O. Box 1450  
Alexandria, VA 22313-1450

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)  
a. ☐ Computer Readable Form (CRF)  
b. Specification Sequence Listing on:  
i. ☐ CD-ROM or CD-R (2 copies); or  
ii. ☐ paper  
c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATIONS PARTS**

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 C.F.R. §3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☒ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Request and Certification under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other: \_\_\_\_\_

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No: \_\_\_\_\_ / \_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_

Group / Art Unit: \_\_\_\_\_

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**17. CORRESPONDENCE ADDRESS**☒ Customer Number or Bar Code Label

30593

or ☐ Correspondence address below

30593

(Insert Customer No. or Attach bar code label here)

|         |                                  |           |              |          |              |
|---------|----------------------------------|-----------|--------------|----------|--------------|
| Name    | Harness, Dickey & Pierce, P.L.C. |           |              |          |              |
| Address | P.O. Box 8910                    |           |              |          |              |
| City    | Reston                           | State     | VA           | Zip Code | 20195        |
| Country | United States of America         | Telephone | 703-668-8000 | Fax      | 703-668-8200 |

|                   |                    |                                   |                   |
|-------------------|--------------------|-----------------------------------|-------------------|
| Name (Print/Type) | John A. Castellano | Registration No. (Attorney/Agent) | 35,094            |
| Signature         |                    | Date                              | February 24, 2004 |

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# **FEE TRANSMITTAL for FY 2003**

Patent fees are subject to annual revision.

Complete if Known

|                     |                      |
|---------------------|----------------------|
| Application Number  | NEW                  |
| Filing Date         | February 24, 2004    |
| Inventor(s)         | MOON-SOOK LEE et al. |
| Examiner Name       | Unknown              |
| Group Art Unit      | Unknown              |
| Attorney Docket No. | 8947-000075/US       |

**TOTAL AMOUNT OF PAYMENT** (\$) 1,130.00

## **METHOD OF PAYMENT (check one)**

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit  
Account  
Number

08-0750

Deposit  
Account  
Name

Harness, Dickey & Pierce, P.L.C.

☒ Charge Any Additional Fee Required  
Under 37 CFR 1.16 and 1.17  
☐ Applicant claims small entity status.  
See 37 CFR 1.27

2. ☒ Payment Enclosed:

☒ Check ☐ Credit card ☐ Money  
Order ☐ Other

## **FEE CALCULATION**

### **1. BASIC FILING FEE**

| Large<br>Fee<br>Code | Entity<br>Fee<br>(\$) | Small<br>Fee<br>Code | Entity<br>Fee<br>(\$) | Fee Description        | Fee Paid |
|----------------------|-----------------------|----------------------|-----------------------|------------------------|----------|
| 1001                 | 770                   | 2001                 | 385                   | Utility filing fee     | 770.00   |
| 1002                 | 340                   | 2002                 | 170                   | Design filing fee      |          |
| 1003                 | 530                   | 2003                 | 265                   | Plant filing fee       |          |
| 1004                 | 770                   | 2004                 | 385                   | Reissue filing fee     |          |
| 1005                 | 160                   | 2005                 | 80                    | Provisional filing fee |          |

**SUBTOTAL (1)**

(\$ 770.00)

### **2. EXTRA CLAIM FEES**

|                       |    |        |   |                 |    |   |                   |    |   |          |     |
|-----------------------|----|--------|---|-----------------|----|---|-------------------|----|---|----------|-----|
| Total Claims          | 33 | -20 ** | = | Extra<br>Claims | 13 | X | Fee from<br>below | 18 | = | Fee Paid | 234 |
| Independent<br>Claims | 4  | -3 **  | = |                 | 1  | X |                   | 86 | = |          | 86  |
| Multiple<br>Dependent |    |        |   |                 |    | X |                   |    | = |          |     |

| Large<br>Fee<br>Code | Entity<br>Fee<br>(\$) | Small<br>Fee<br>Code | Entity<br>Fee<br>(\$) | Fee Description  |
|----------------------|-----------------------|----------------------|-----------------------|--|
| 1202                 | 18                    | 2202                 | 9                     | Claims in excess of 20                                     |
| 1201                 | 86                    | 2201                 | 43                    | Independent claims in excess of 3                          |
| 1203                 | 290                   | 2203                 | 145                   | Multiple dependent claim, if not paid                      |
| 1204                 | 86                    | 2204                 | 43                    | ** Reissue independent claims over original patent         |
| 1205                 | 18                    | 2205                 | 9                     | ** Reissue claims in excess of 20 and over original patent |

**SUBTOTAL (2)**

(\$ 320.00)

## **FEE CALCULATION (continued)**

| Large<br>Entity<br>Fee<br>Code | Large<br>Entity<br>Fee<br>(\$) | Small<br>Entity<br>Fee<br>Code | Small<br>Entity<br>Fee<br>(\$) | Fee Description  | Fee Paid |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--|----------|
| 1051                           | 130                            | 2051                           | 65                             | Surcharge - late filing fee or oath  |          |
| 1052                           | 50                             | 2052                           | 25                             | Surcharge - late provisional filing fee or cover sheet.                    |          |
| 1053                           | 1053                           | 1053                           | 130                            | Non-English specification  |          |
| 1812                           | 2,520                          | 1812                           | 2,520                          | For filing a request for reexamination                                     |          |
| 1804                           | 920*                           | 1804                           | 920*                           | Requesting publication of SIR prior to Examiner action                     |          |
| 1805                           | 1,840*                         | 1805                           | 1,840*                         | Requesting publication of SIR after Examiner action                        |          |
| 1251                           | 110                            | 2251                           | 55                             | Extension for reply within first month                                     |          |
| 1252                           | 420                            | 2252                           | 210                            | Extension for reply within second month                                    |          |
| 1253                           | 950                            | 2253                           | 475                            | Extension for reply within third month                                     |          |
| 1254                           | 1,480                          | 2254                           | 740                            | Extension for reply within fourth month                                    |          |
| 1255                           | 2,010                          | 2255                           | 1,005                          | Extension for reply within fifth month                                     |          |
| 1401                           | 330                            | 2401                           | 165                            | Notice of Appeal   |          |
| 1402                           | 330                            | 2402                           | 165                            | Filing a brief in support of an appeal                                     |          |
| 1403                           | 290                            | 2403                           | 145                            | Request for oral hearing   |          |
| 1451                           | 1,510                          | 1451                           | 1,510                          | Petition to institute a public use proceeding                              |          |
| 1452                           | 110                            | 2452                           | 55                             | Petition to revive - unavoidable   |          |
| 1453                           | 1,330                          | 2453                           | 665                            | Petition to revive - unintentional   |          |
| 1501                           | 1,330                          | 2501                           | 665                            | Utility issue fee (or reissue)   |          |
| 1502                           | 480                            | 2502                           | 240                            | Design issue fee   |          |
| 1503                           | 640                            | 2503                           | 320                            | Plant issue fee  |          |
| 1460                           | 130                            | 1460                           | 130                            | Petitions to the Commissioner  |          |
| 1807                           | 50                             | 1807                           | 50                             | Processing fee under 37 CFR 1.17 (q)                                       |          |
| 1806                           | 180                            | 1806                           | 180                            | Submission of Information Disclosure Stmt                                  |          |
| 8021                           | 40                             | 8021                           | 40                             | Recording each patent assignment per property (times number of properties) | 40.00    |
| 1809                           | 770                            | 2809                           | 385                            | Filing a submission after final rejection (37 CFR § 1.129(a))              |          |
| 1810                           | 770                            | 2810                           | 385                            | For each additional invention to be examined (37 CFR § 1.129(b))           |          |
| 1801                           | 770                            | 2801                           | 385                            | Request for Continued Examination (RCE)                                    |          |
| 1802                           | 900                            | 1802                           | 900                            | Request for expedited examination of a design application                  |          |

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)**

(\$ 40.00)

## **SUBMITTED BY**

|                   |                    |                                  |        |           |                   |
|-------------------|--------------------|----------------------------------|--------|-----------|-------------------|
| Name (Print/Type) | John A. Castellano | Registration No. Attorney/Agent) | 35,094 | Telephone | 703-668-8000      |
| Signature         |                    |                                  |        | Date      | February 24, 2004 |

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